



## **NORTH CAROLINA** Department of Transportation



# Bridge Preservation Update

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# Overview

State Bridge Funding

Bridge System Condition Update

Preservation of High Value Bridges

Common Bridge Preservation Activities

Project Examples

# State Bridge Funding Overview

BRIDGE PROGRAM	BRIDGE PRESERVATION
<b>\$280M</b> FY17/18 <b>\$272M</b> FY18/19	<b>\$80M</b> FY17/18 <b>\$82M</b> FY18/19
IMPROVE DEFICIENT BRIDGES	PRESERVE OR REHABILITATE TO GOOD CONDITION

# Bridge Condition Update

GOALS			2014			CURRENT		
10% Deficient			16.4% Deficient			11.1% Deficient		
2%	6%	15%	4%	9%	21%	3%	8%	14%
Interstate	Primary	Secondary	Interstate	Primary	Secondary	Interstate	Primary	Secondary

# Focus: Preservation of High Value Bridges

REPLACEMENT COSTS  
BETWEEN **\$20M & \$400M**

**204** BRIDGES

TOTAL REPLACEMENT COST:  
**\$9B**

TOTAL PRESERVATION  
NEEDS:

**\$400M** TO MAINTAIN GOOD  
CONDITION (PREVENT SD)





# Common Bridge Preservation Activities

CONCRETE OVERLAY PREPARATION



CONCRETE OVERLAY PLACEMENT

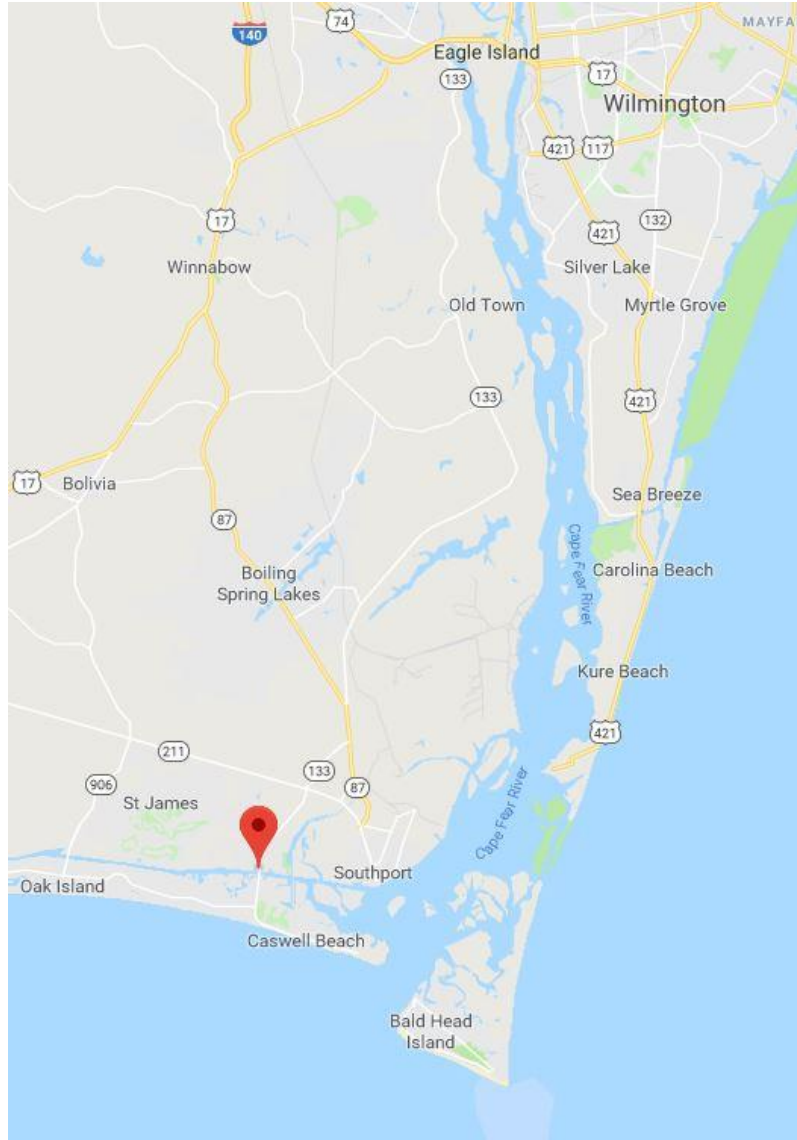


CONCRETE SUBSTRUCTURE REPAIR



PAINTING STEEL GIRDERS

# Active Project – Barbee Bridge, Oak Island



NC 133 OVER INTRACOASTAL WATERWAY - BUILT IN 1972

CURRENT CONDITION: **FAIR**

**ESTIMATED REPLACEMENT COST: \$93.2M**

## **REHABILITATION NEEDS:**

REPLACE LOW WATER CONCRETE BEAMS, OVERLAY DECK, NEW BICYCLE SAFE BARRIER RAIL, MISCELLANEOUS CONCRETE REPAIRS

**COST TO REHABILITATE: \$15.8 M**

ESTIMATED LIFE EXTENSION: **50 YEARS**



# Active Project - Oak Island Bridge

## SUPERSTRUCTURE IMPROVEMENTS



Existing Low Water Beams



New Low Water Beams



Bridge  
Deck  
Overlay

## RAIL IMPROVEMENTS



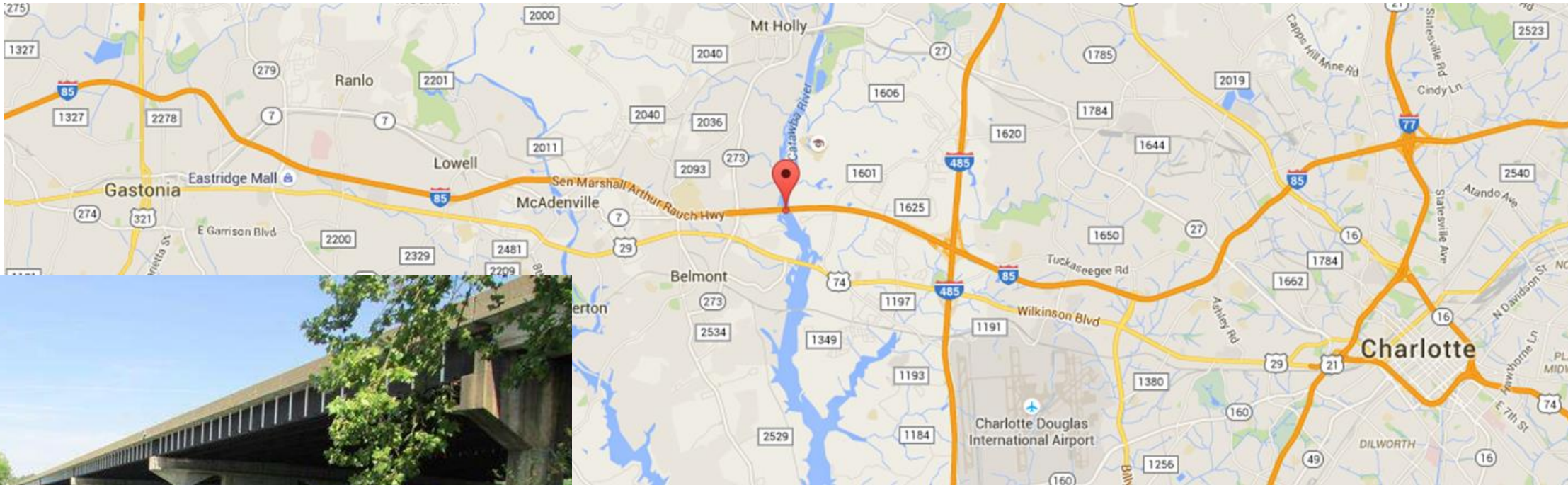
Existing  
27" Rail



New  
54" Rail



# Future Project – Gaston County #159



I-85 OVER THE CATAWBA RIVER  
BUILT IN 1958 – WIDENED IN 1988

CURRENT CONDITION: **DECK - FAIR**

**SUBSTRUCTURE - GOOD**

**ESTIMATED REPLACEMENT COST: \$125 Million**

# Future Project – Gaston County #159



## **PRESERVATION NEEDS:**

OVERLAY DECK, REPLACE EXPANSION JOINTS, CLEAN AND PAINT STEEL GIRDERS AND BEARINGS, MISCELLANEOUS CONCRETE REPAIRS

**ESTIMATED COST TO REHABILITATE: \$5M**

**ESTIMATED LIFE EXTENSION: 25 YEARS**

# High Value Bridge Preservation Projects

TOTAL COST (# BRIDGES)	
FY17/18	\$77M (17)
FY18/19	\$70M (20)
FUTURE	\$ 250M (167)



# Summary

## Bridge Preservation Funding

- Maintain good condition
- Extends service life
- Lowest life cycle cost
- Assists in achieving statewide and system goals